

## ABSTRACT

An ultrasonic diagnostic apparatus which is capable of generating a pulse sound field with high sensitivity and high resolution, particularly in short distances, is disclosed. In the ultrasonic diagnostic apparatus according to the present invention, a hyperbola operation section 4 derives the distance from each of a plurality of arranged transducer elements 1 to the convergence positions from a hyperbolic function wherein the gradient "a" of an asymptote is  $0 < |a| < 1$ , with the positions in the horizontal direction of the ultrasonic transducer elements as the variable, and a delay data generation section 3 and a driving circuit 2 generate the driving pulse of each of the plurality of ultrasonic transducer elements delayed in accordance to the distances calculated by the hyperbola operation section.